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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,390	09/30/2003	Daniel C. Biederman	CISCO-8090	9146

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SIERRA PATENT GROUP, LTD.  
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EXAMINER
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SMITHERS, MATTHEW

ART UNIT	PAPER NUMBER
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2137

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/676,390	BIEDERMAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Matthew B. Smithers	2137	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-12, 14, 16 and 20 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 13, 15 and 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                 |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                            | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/03/05</u> | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### ***Information Disclosure Statement***

The information disclosure statement filed November 3, 2005 has been placed in the application file and the information referred to therein has been considered as to the merits.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No.

10/676384. Although the conflicting claims are not identical, they are not patentably

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distinct from each other because all the limitations of claim 1 of the instant application are anticipated by claim 1 of application number 10/676384.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 9-12, 14, 16 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. patent application Us 20050084076 granted to Dhir et al.

Regarding claim 1, Dhir meets the claimed limitations as follows:

“An apparatus for providing link layer security in a Physical Layer Transceiver (PHY) comprising: analog circuitry configured to transmit to, and receive data from, a data transmission medium; digital circuitry coupled to said analog circuitry, said digital circuitry configured to transmit to, and receive from, a Media Access Controller (MAC); and a crypto engine coupled to said digital circuitry.” see paragraphs [0031]-[0032]; [0037]-[0038]; [0043]; [0050] and Figures 1, 4, 7 and 8.

Regarding claim 2, Dhir meets the claimed limitations as follows:

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"The apparatus of claim 1, wherein said crypto engine and said PHY are disposed on the same physical chip." see paragraphs [0030]-[0032] and Figure 1.

Regarding claim 3, Dhir meets the claimed limitations as follows:

"The apparatus of claim 2, wherein said crypto engine uses pre-existing hardware on said chip, said hardware pre-existing for the purpose of enabling the function of said PHY." see paragraphs [0030]-[0032] and Figure 1.

Regarding claim 4, Dhir meets the claimed limitations as follows:

"The apparatus of claim 2, wherein said apparatus is a component of a multi-PHY device." see paragraphs [0030]-[0032] and Figure 1.

Regarding claim 5, Dhir meets the claimed limitations as follows:

"The apparatus of claim 2, wherein said PHY communicates using a serial PHY media interface." see paragraph [0054].

Regarding claim 6, Dhir meets the claimed limitations as follows:

"The apparatus of claim 3, wherein said pre-existing hardware is chosen from the group consisting of: said PHY's pin functionality, memory map, state machine, signals, signal buses and logic gates." see paragraphs [0030]-[0032] and Figure 1.

Regarding claim 9, Dhir meets the claimed limitations as follows:

"The apparatus of claim 2, wherein said MAC comprises an ASIC further configured as a switching fabric." see paragraphs [0031]-[0032];[0041];[0056];[0058] and Figures 1, 2 and 10.

Regarding claim 10, Dhir meets the claimed limitations as follows:

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"The apparatus of claim 9, wherein said apparatus is disposed within a router." see paragraphs [0031]-[0032];[0041];[0056];[0058] and Figures 1, 2 and 10.

Regarding claim 11, Dhir meets the claimed limitations as follows:

"The apparatus of claim 10, wherein said crypto engine is further configured to manage data packet collisions." see paragraphs [0031]-[0032];[0041];[0056];[0058] and Figures 1, 2 and 10.

Regarding claim 12, Dhir meets the claimed limitations as follows:

"A method of providing link layer security between a transmitting PHY and a receiving PHY, said method comprising: receiving, by the transmitting PHY, data from a first MAC; encrypting, by said transmitting PHY, said data, producing encrypted data; transmitting, by said transmitting PHY, said encrypted data to said receiving PHY; receiving, by said receiving PHY, said encrypted data; decrypting, by said receiving PHY, said encrypted data; and providing the de-crypted data to a second MAC." see paragraphs [0031]-[0032]; [0037]-[0038]; [0043]; [0050] and Figures 1, 4, 7 and 8.

Regarding claim 14, Dhir meets the claimed limitations as follows:

"A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method, the method comprising: receiving, by the transmitting PHY, data from a first MAC; encrypting, by said transmitting PHY, said data, producing encrypted data; transmitting, by said transmitting PHY, said encrypted data to said receiving PHY; receiving, by said receiving PHY, said encrypted data; decrypting, by said receiving PHY, said encrypted data; and providing

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the de-crypted data to a second MAC.” see paragraphs [0031]-[0032]; [0037]-[0038]; [0043]; [0050] and Figures 1, 4, 7 and 8.

Regarding claim 16, Dhir meets the claimed limitations as follows:

“An apparatus for providing link layer security in a Physical Layer Transceiver (PHY) comprising: means for receiving data from a first MAC; means for encrypting said data, producing encrypted data; means for transmitting said encrypted data to said receiving PHY; means for receiving said encrypted data; means for decrypting said encrypted data; and means for providing the de-crypted data to a second MAC.” see paragraphs [0031]-[0032]; [0037]-[0038]; [0043]; [0050] and Figures 1, 4, 7 and 8.

Regarding claim 20, Dhir meets the claimed limitations as follows:

“The apparatus of claim 16, wherein said MAC further comprises switching fabric means.” see paragraphs [0031]-[0032];[0041] and Figures 1 and 2.

### ***Allowable Subject Matter***

Claims 7, 8, 13, 15 and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 7-8, the cited prior art fails to specifically teach wherein said crypto engine is further configured to perform a secondary function comprising marking undesired data for dropping.

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With respect to claims 13 and 15, the cited prior art fails to specifically teach storing, by said transmitting PHY, said encrypted data; determining whether a packet collision has occurred; and if a collision has occurred, then re-transmitting said stored encrypted data.

With respect to claims 17-19, the cited prior art fails to specifically teach means for storing said encrypted data; means for determining whether a packet collision has occurred; and means for re-transmitting said stored encrypted data; wherein said crypto engine means is further configured to perform a secondary function comprising data compression.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Pantelias et al (US 20040076181) discloses a communications system utilizing a media access controller and physical layer transceivers.

B. Liu et al (US 20030126428) discloses a security system for encrypting and decrypting transmitted packets.

C. Smith et al (US 6,973,566) discloses a communications system for signaling security violations in the physical layer hardware unit that are inconsistent with the secure control codes in the digital received signal.

D. Laborde (US 5,689,568) discloses a system for transmitting data between mobile terminals.




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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew B. Smithers whose telephone number is (571) 272-3876. The examiner can normally be reached on Monday-Friday (8:00-4:30) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel L. Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Matthew B Smithers  
Primary Examiner  
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